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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/888,385	06/26/2001	Dennis G. Thibedeau	10473-784	9489

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EXAMINER
HE, AMY

ART UNIT	PAPER NUMBER
2858	

DATE MAILED: 04/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/888,385	Applicant(s) THIBEDEAU ET AL.	
	Examiner Amy He	Art Unit 2858	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 March 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *16,17,23 and 24* is/are allowed.

6)☒ Claim(s) *1-4,9-15 and 18* is/are rejected.

7)☒ Claim(s) *5-8 and 19-22* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 June 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claim 1-4, 9-10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over UK patent GB2073464, in view of Sievers et al. (U.S. Patent No: 4, 379, 990).

Referring to claim 1, UK patent GB2073464 discloses a method for evaluating operation of an alternator comprising:

detecting a frequency component (using frequency meter 21A) of an alternator output signal (specification page, column 1, lines 18-20 and lines 34-35);

comparing the frequency component of the alternator output signal with a threshold frequency (specification page, column 1, lines 21-22) ; and

evaluating operation of the alternator based on a result of the comparing step (specification page, column 1, lines 24-29).

UK patent GB2073464 does not specifically disclose that the alternator output signal is representative of a rectified output of the alternator. However, detecting from a rectified alternator output signal is conventional in the art, as evidenced by Sievers.

(Abstract, lines 4-6; Figure 1). A person of ordinary skill in the art at the time of the invention would find it obvious to modify UK patent GB2073464 to detect the frequency component from a rectified alternator output signal, as taught by Sievers, in order to smooth out the alternator output signal, therefore, more accurately determine the frequency component of the alternator output signal.

Referring to claim 2, UK patent GB2073464 discloses the method of claim 1. UK patent GB2073464 does not disclose maintaining the rotational speed of the alternator at a predetermined level before detecting the frequency component of the alternator output signal.

Sievers suggests that if the alternator rotational speed is too low, it may cause an inaccurate detection (column 14, lines 62-66).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify UK patent GB2073464 to maintain the alternator rotation speed above a certain threshold value, as suggested by Sievers, so as to measure the frequency component more accurately.

Referring to claim 3, UK patent GB2073464 discloses the method of claim 1, wherein if the frequency component is smaller than the threshold frequency (34 HZ), the alternator is determined as defective (specification page, column 2, lines 89-92 and lines 113-117).

Referring to claims 4 and 18, UK patent GB2073464 discloses a system for evaluating the operation of an alternator comprising:

a terminal/means (see terminal to the left of the frequency detector in Figure 4) for receiving an alternator output signal representative of an output of the alternator;

a frequency detection device/means (frequency detector in Figure 4) for detecting a frequency component of the alternator output signal;

a controller/means (control logic in Figure 3)for comparing the frequency component of the alternator output signal to a threshold frequency, and generating an indication signal (alarm signal) based on result of the comparison; and

an indication device (visual alarm) responsive to the content of the indication signal for indicating the operation of the alternator (specification page, column 2, line 81).

UK patent GB2073464 does not specifically disclose that the alternator output signal is representative of a rectified output of the alternator. Sievers teaches detecting from a rectified alternator output signal (abstract, lines 4-6; Figure 1). A person of ordinary skill in the art at the time of the invention would find it obvious to modify UK patent GB2073464 to detect the frequency component from a rectified alternator output signal, as taught by Sievers, for the same reasons stated above for the rejection of claim 1.

Referring to claim 9, UK patent GB2073464 discloses the system of claim 4, wherein the alternator output signal is the voltage generated by the alternator (see Figure 4).

Referring to claim 10, UK patent GB2073464 discloses the system of claim 4, wherein the alternator is installed in an automotive vehicle and driven by the engine of the automotive vehicle (specification page, column 1, lines 5-8).

2. Claims 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over UK patent GB2073464, in view of Sievers et al. (U.S. Patent No: 4, 379, 990), as applied to claims 4 and 10 above, and further in view of Bertness (U.S. Patent No: 6,331,762).

Referring to claims 11, 12 and 14, UK patent GB2073464 in view of Sievers discloses the system of claim 10. UK patent GB2073464 in view of Sievers does not disclose a database, accessible by the controller, including threshold frequencies corresponding to more than one vehicle model, as well as threshold frequencies corresponding to more than one engine or alternator rotational speeds.

Bertness discloses a database/memory (memory 40), accessible by the controller (microprocessor 12 or 22), which could be used to store various threshold corresponding to more than one vehicle model, as well as various engine or motor rotational speeds (column 9, lines 54-66; column 8, lines 1-10; column 11, lines 23-30; column 13, lines 23-26; lines 44-49).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to further modify UK patent GB2073464, as modified by Sievers, to use a database, accessible by the controller, including threshold frequencies corresponding to more than one vehicle model, as well as threshold frequencies corresponding to more than one engine or alternator rotational speed, so that the alternator tester could be used for different vehicle models, different engine or alternator speed.

Referring to claims 13 and 15, UK patent GB2073464 in view of Sievers discloses the system of claims 4 and 10, except for an alternator output signal received from a vehicle computer, or a data processing system.

Bertness discloses an alternator output signal, received from a vehicle computer, or a data processing system, installed on the automotive vehicle (the microprocessor, column 15, claim 9).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to further modify UK patent GB2073464 in view of Sievers to obtain an alternator output signal from a vehicle computer installed on the automotive, as taught by Bertness, to improve efficiency of the evaluation.

Response to Arguments

3. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection. In response to applicant's argument that the UK patent application GB2073464 does not teach the newly added limitation of

detecting the frequency component of an alternator output signal representative of a **rectified** output of the alternator, the examiner admits that the UK patent application does not teach a rectified alternator output. However, this deficiency is clearly alleviated by Sievers et al. (U.S. Patent No: 4, 379, 990), as evidenced in Figure 1 (also, see the abstract). A person of ordinary skill in the art would find it obvious to modify the UK patent application to detect the frequency component from a rectified alternator output, in order to ensure a more accurate detection result of the frequency component.

Allowable Subject Matter

4. Claims 5-8 are objected to as being dependent upon a rejected base claim (claim 4), but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 16-17 and 23-24 are allowed.

6. Claims 19-22 are objected to as being dependent upon a rejected base claim (claim 18), but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy He whose telephone number is (703) 305-3360. The examiner can normally be reached on 8:30am-5pm Monday through Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, N. Le can be reached on (703) *308-0750*.

The official Fax numbers for the organization are (703-872-9318) Before-Final and (703-872-9319) After-Final Office actions. Any inquiry of a general nature relating to this application should be directed to the receptionist at (703) 305-4900.

AH
April 23, 2003

N. Le
Supervisory Patent Examiner
Technology Center 2800